



Sequence listing.txt
SEQUENCE LISTING

<110> Babraham Bioscience Technologies Limited
<120> Recombinant Nematode Nicotinic Receptor and Uses
<130> 18396/2112
<140> US10/010,873
<141> 2001-12-07
<150> PCT/GB00/02270
<151> 2000-06-09
<150> GB9913248.2
<151> 1999-06-09
<160> 4
<170> PatentIn Ver. 3.1
<210> 1
<211> 502
<212> PRT
<213> Caenorhabditis elegans

<400> 1
Met Gly Pro Asn Asp His Gly Phe Ala Tyr Ile Leu Ile Phe Leu Leu
1 5 10 15
Leu Ser Pro Pro Thr His Ala Asn Arg Asp Ala Asn Arg Leu Phe Glu
20 25 30
Asp Leu Ile Ala Asp Tyr Asn Lys Leu Val Arg Pro Val Ser Glu Asn
35 40 45
Gly Glu Thr Leu Val Val Thr Phe Lys Leu Lys Leu Ser Gln Leu Leu
50 55 60
Asp Val His Glu Lys Asn Gln Ile Met Thr Thr Asn Val Trp Leu Gln
65 70 75 80
His Ser Trp Met Asp Tyr Lys Leu Arg Trp Asp Pro Val Glu Tyr Gly
85 90 95
Gly Val Glu Val Leu Tyr Val Pro Ser Asp Thr Ile Trp Leu Pro Asp
100 105 110
Val Val Leu Tyr Asn Asn Ala Asp Gly Asn Tyr Gln Val Thr Ile Met
115 120 125
Thr Lys Ala Lys Leu Thr Tyr Asn Gly Thr Val Glu Trp Ala Pro Pro
130 135 140
Ala Ile Tyr Lys Ser Met Cys Gln Ile Asp Val Glu Phe Phe Pro Phe
145 150 155 160
Asp Arg Gln Gln Cys Glu Met Lys Phe Gly Ser Trp Thr Tyr Gly Gly
165 170 175
Leu Glu Val Asp Leu Gln His Arg Asp Lys His Leu Glu Lys Glu Ile
180 185 190

Sequence listing.txt

Glu Glu Asp Val Glu Gly Val Asp Gly Pro Thr Lys Glu Ile Val Trp
195 200 205

Val Val Asp Arg Gly Ile Asp Leu Ser Asp Tyr Tyr Pro Ser Val Glu
210 215 220

Trp Asp Ile Leu Asn Val Pro Gly Lys Arg His Ser Lys Arg Tyr Pro
225 230 235 240

Cys Cys Glu Ser Pro Phe Ile Asp Ile Thr Tyr Glu Ile His Leu Arg
245 250 255

Arg Lys Thr Leu Phe Tyr Thr Val Asn Leu Ile Phe Pro Ser Val Gly
260 265 270

Ile Ser Phe Leu Thr Ala Leu Val Phe Tyr Leu Pro Ser Asp Gly Gly
275 280 285

Glu Lys Ile Ser Leu Cys Ile Ser Ile Leu Ile Ser Leu Thr Val Phe
290 295 300

Phe Leu Leu Leu Val Glu Ile Ile Pro Ser Thr Ser Leu Val Ile Pro
305 310 315 320

Leu Ile Gly Lys Tyr Leu Leu Phe Thr Met Val Leu Val Thr Leu Ser
325 330 335

Val Val Val Thr Val Val Thr Leu Asn Val His Tyr Arg Ser Pro Thr
340 345 350

Thr His Thr Met Pro Lys Trp Met Lys Arg Leu Phe Val Asp Phe Leu
355 360 365

Pro Lys Tyr Leu Leu Met Thr Arg Pro Gln Pro Pro Gly His His Ser
370 375 380

Lys Pro Asn Arg Lys Phe Asp Ser Arg Ala Ser Thr Phe Ser Ile Gly
385 390 395 400

Val Asn His Val Leu Gly Gln Asn Ser Glu Leu Leu Ser Pro Gly Leu
405 410 415

Asn Ser Asn Arg Glu Glu Ser Ser Phe Thr Leu Pro Arg Asp Asn Ser
420 425 430

Pro Val Arg Ser Ala Val Glu Ser Val Ala Tyr Ile Ala Asp His Leu
435 440 445

Lys Asn Glu Glu Asp Asp Lys Gln Val Ile Glu Asp Trp Lys Tyr Ile
450 455 460

Ser Val Val Met Asp Arg Ile Phe Leu Ile Thr Phe Thr Phe Ala Cys
465 470 475 480

Ala Phe Gly Thr Val Val Ile Ile Ala Arg Ala Pro Ser Ile Tyr Asp
485 490 495

Asn Thr Pro Ala Leu Ala
500

<210> 2
<211> 513

Sequence listing.txt

<212> PRT

<213> *Caenorhabditis elegans*

<400> 2

```

Met Arg Ser Phe Trp Leu Phe Leu Leu Leu Leu Leu Phe Cys Ile Ser
 1          5          10
Phe Ile Lys Leu Thr Glu Gly Asn Glu Asp Ala Lys Arg Leu Tyr Asp
          20          25          30
Asp Leu Met Val Asn Tyr Asn Arg His Arg Arg Pro Ser Thr Ser Pro
          35          40          45
Asn Lys Pro Leu Thr Ile Lys Leu Lys Leu Lys Leu Arg Leu Ser Gln
          50          55          60
Ile Ile Asp Val His Glu Ile Asp Gln Ile Met Thr Cys Ser Val Trp
          65          70          75          80
Leu Lys Gln Thr Trp Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
          85          90          95
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ile Trp Val
          100          105          110
Pro Asp Ile Val Leu Tyr Asn Asn Ala Asp Ser Asn Tyr Asn Ile Thr
          115          120          125
Ile Ser Thr Lys Ala Thr Leu His Tyr Thr Gly Glu Val Thr Trp Glu
          130          135          140
Pro Pro Ala Ile Phe Lys Ser Met Cys Gln Ile Asp Val Arg Trp Phe
          145          150          155          160
Pro Phe Asp Glu Gln Gln Cys His Leu Lys Phe Gly Ser Trp Thr Phe
          165          170          175
Ser Glu Asn Leu Leu Ser Val Glu Leu Asn Glu Pro Ser Leu Arg Tyr
          180          185          190
Glu Glu Glu Ile Asp Glu Lys Gly Ile Ile Asp Asn Val Xaa Xaa Xaa
          195          200          205
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
          210          215          220
Xaa Met Ser Arg Val Ala Lys Arg Arg Ala Lys Asn Tyr Pro Ser Cys
          225          230          235          240
Cys Pro Gln Ser Ala Tyr Ile Asp Val Thr Tyr Tyr Leu Gln Leu Arg
          245          250          255
Arg Lys Pro Leu Phe Tyr Thr Val Asn Leu Val Phe Pro Cys Val Gly
          260          265          270
Ile Ser Phe Leu Thr Ile Leu Val Phe Tyr Leu Pro Ser Asp Ser Gly
          275          280          285
Glu Lys Val Thr Leu Cys Ile Ser Ile Leu Val Ala Leu Thr Ile Phe
          290          295          300
Phe Leu Leu Leu Thr Glu Ile Ile Pro Ala Thr Ser Ile Thr Leu Pro
          305          310          315          320

```

Sequence listing.txt

Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 325 330 335
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Leu His Phe Arg Thr Pro Thr
 340 345 350
 Thr His Leu Met Pro Asn Trp Val Lys Lys Val Phe Leu Lys Trp Leu
 355 360 365
 Pro Lys Leu Leu Phe Met Arg Arg Pro Ile Asp Asp Tyr Glu Glu Lys
 370 375 380
 Phe Asp Asp Lys Lys Lys Pro Lys Asp Gly Lys Ile Ala Leu Ser Val
 385 390 400
 His Ala His Arg Val Ser Asn Val Gly Asn Asn Ile Arg Asn Ala Thr
 405 410 415
 Ile Asp Asp Thr Ile Gln Lys Met Tyr Tyr Ser Pro Pro Xaa Xaa Xaa
 420 425 430
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 435 440 445
 Xaa Xaa Xaa Xaa Ile Asp Glu Asp Trp Lys Tyr Val Ala Met Val Leu
 450 455 460
 Asp Arg Leu Phe Leu Leu Ile Phe Ser Ile Ala Cys Phe Val Gly Thr
 465 470 475 480
 Val Ile Ile Leu Leu Arg Ala Pro Thr Leu Tyr Asp Thr Arg Gln Pro
 485 490 495
 Ile Asp Leu Gln Tyr Arg Pro Ala Asn Leu Ser Ala Asn Pro Ile Ser
 500 505 510
 Phe

<210> 3
 <211> 507
 <212> PRT
 <213> Caenorhabditis elegans

<400> 3
 Met Met Leu Gly Gly Gly Gly Gly Cys Gly Ala Gly Gly Thr Trp Leu
 1 5 10 15
 Gly Phe Leu Val Phe Leu Ala Val Ser Leu Arg Asn His Ser Thr Cys
 20 25 30
 Glu Asp Ile Asp Ala Glu Asp Arg Leu Met Val Asp Leu Phe Arg Gly
 35 40 45
 Tyr Asn Ser Leu Val Gln Pro Val Arg Asn Arg Ser Glu Leu Pro Met
 50 55 60
 Ile Val Lys Ile Gly Met Gln Leu Val Leu Leu Ile Asn Val Asp Glu
 65 70 75 80
 Lys Glu Gln Val Met His Thr Asn Val Trp Leu Thr Met Lys Trp Xaa
 85 90 95

Sequence listing.txt

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 100 105 110
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val Trp Leu Pro Asp Ile Val Leu Phe
 115 120 125
 Asn Asn Ala Asp Gly Asn Tyr Glu Val Ser Phe Met Cys Asn Val Leu
 130 135 140
 Ile Leu Ser Thr Gly Thr Val Leu Trp Val Pro Pro Ala Ile Tyr Lys
 145 150 155
 Ser Ser Cys Ile Ile Asp Val Glu Phe Phe Pro Phe Asp Asp Gln Leu
 165 170 175
 Cys Ser Leu Thr Phe Gly Ser Trp Thr Tyr Asn Arg Asp Glu Ile Lys
 180 185 190
 Leu Asp Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 195 200 205
 Xaa Xaa Xaa Xaa Xaa Xaa Met Asp Gly Pro Ala Val Leu Thr Ser Asp
 210 215 220
 Arg Ser Arg Ile Glu Phe Gln Ile Arg Ile Arg Arg Lys Thr Leu Phe
 225 230 235
 Tyr Thr Val Val Leu Ile Leu Pro Thr Val Leu Met Ala Phe Leu Asn
 245 250 255
 Val Thr Val Phe Tyr Leu Pro Thr Ala Ser Gly Glu Lys Met Gly Leu
 260 265 270
 Thr Met Asn Val Leu Leu Ser Ile Val Val Phe Leu Leu Leu Val Ser
 275 280 285
 Lys Ile Leu Pro Pro Thr Ser Ser Ser Ile Pro Leu Xaa Xaa Xaa Xaa
 290 295 300
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 305 310 315 320
 Xaa Xaa Xaa Xaa Ile Tyr Phe Arg Ser Pro Ile Thr His Arg Leu Pro
 325 330 335
 Pro Trp Val Arg Lys Val Phe Leu Asp Ile Leu Pro Leu Leu Met Cys
 340 345 350
 Met Gln Arg Pro His Arg Lys Asn Val Ile Gln Arg Ser His Arg Arg
 355 360 365
 Leu Leu Glu Thr Gly Pro Ser Val Glu Glu Asn Pro Met Arg Ser Gly
 370 375 380
 Glu His His Pro Leu Cys Arg His Thr His Asn Gln Asp Ser Cys Arg
 385 390 395 400
 Arg Val Arg Ile Gln Ser Asp Glu Leu Asp Asp Glu Leu Ser Pro Glu
 405 410 415
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 420 425 430

Sequence listing.txt

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Phe Arg Asp Asp Trp Lys Phe Ile Ala
 435 440 445
 Ser Val Val Asp Arg Phe Leu Leu Tyr Gly Phe Phe Gly Ala Thr Val
 450 455 460
 Gly Gly Thr Ile Gly Ile Ile Phe Thr Ala Pro Ser Val Phe Glu Thr
 465 470 475 480
 Phe Asp Glu Asn Ala Thr Leu Val Lys Leu Lys Gln Leu Tyr Asp Met
 485 490 495
 Gly Leu Ala Asn Asp Thr Val Leu Gly Ile Phe
 500 505

<210> 4
 <211> 493
 <212> PRT
 <213> Caenorhabditis elegans

<400> 4
 Met Arg Thr Asn Arg Leu Ser Trp Ile Leu Val Leu Ser Val Val Ile
 1 5 10 15
 Phe Leu Val Ile Ile Asn Thr Ile Asn Ala Ser Asp Asp Glu Glu Arg
 20 25 30
 Leu Met Val Asp Val Phe Arg Gly Tyr Asn Ser Leu Ile Gln Pro Val
 35 40 45
 Arg Asn Ser Ser Glu Leu Pro Leu Ile Val Lys Met Ala Leu Gln Leu
 50 55 60
 Val Leu Leu Ile Asn Val Asp Glu Lys Asp Gln Val Met His Thr Asn
 65 70 75 80
 Val Trp Leu Thr Leu Gln Trp Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 85 90 95
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val
 100 105 110
 Trp Leu Pro Asp Ile Val Leu Phe Asn Asn Ala Asp Gly Asn Tyr Glu
 115 120 125
 Val Ser Phe Met Cys Asn Val Val Ile Asn His Lys Gly Asp Met Leu
 130 135 140
 Trp Val Pro Pro Ala Ile Tyr Lys Ser Ser Cys Ile Ile Asp Val Glu
 145 150 155 160
 Phe Phe Pro Phe Asp Glu Gln Val Cys Thr Leu Val Phe Gly Ser Trp
 165 170 175
 Thr Tyr Asn Glu Asn Glu Ile Lys Leu Glu Phe Xaa Xaa Xaa Xaa Xaa
 180 185 190
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ile Asp
 195 200 205
 Val Pro Ala Ser Leu Val Asn Lys Arg Ser Arg Ile Glu Phe Gln Val
 Page 6

Sequence listing.txt

210
 Arg Ile Arg Arg Lys Thr Leu Phe Tyr Thr Val Val Leu Ile Ile Pro
 225 230 235 240
 Thr Val Leu Met Ala Phe Leu Ser Met Ala Val Phe Phe Leu Pro Thr
 245 250 255
 Asp Ser Gly Glu Lys Ile Thr Leu Thr Ile Ser Val Leu Leu Ser Ile
 260 265 270
 Val Val Phe Leu Leu Leu Val Ser Lys Ile Leu Pro Pro Thr Ser Ser
 275 280 285
 Thr Ile Pro Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 290 295 300
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val Tyr Phe Arg
 305 310 315 320
 Gly Pro Arg Thr His Arg Met Pro Gln Trp Val Arg Val Val Phe Leu
 325 330 335
 Gln Phe Leu Pro Lys Leu Val Cys Met Lys Arg Pro Lys Ser Ala Ser
 340 345 350
 Glu Arg Ser Ala Val Arg Ser Gly Met Ala Gln Leu Pro Gly Val Gly
 355 360 365
 Gln Phe Thr Leu Ser Pro Ser Ala His His Pro Leu Cys Pro Ser Ala
 370 375 380
 Asp Asp Arg Thr Thr Thr Ile Arg Asn Thr Ala Ser Asn Glu Thr Ser
 385 390 395 400
 Ala Tyr Tyr Pro Leu Ser Thr Asp Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 405 410 415
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Phe
 420 425 430
 Arg Asp Asp Trp Lys Tyr Val Ala Met Ile Ile Asp Arg Leu Leu Leu
 435 440 445
 Tyr Val Phe Phe Gly Ile Thr Val Gly Gly Thr Cys Gly Ile Leu Phe
 450 455 460
 Ser Ala Pro His Val Phe Gln Arg Ile Asp Gln Gln Glu Met Leu Asp
 465 470 475 480
 Arg Leu Lys Glu Lys Tyr Asp Thr Ala Ser Asn Ile Pro
 485 490